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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,072	02/15/2001	Takayuki Tsuboi	35.C15131	3809

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EXAMINER

BLACKMAN, ROCHELLE ANN J

ART UNIT PAPER NUMBER

2851

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,072

Applicant(s)

TSUBOI ET AL.

Examiner

Rochelle Blackman

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-28 and 30-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-28 and 30-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-15, 17-28, and 30-32 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Berge et al., PCT Publication No. WO99/18456 (U.S. Patent No. 6,369,954, which corresponds to PCT Publication No. WO/18456, is being used as a translation).

Berge discloses a "photo-taking device"/ "imaging optical system"/ an "image pick-up means"/ an "optical system in which a predetermined image is formed or light of the image is converged by a lens element, said optical system comprising a variable-power element/optical element incorporated in the lens element"(see Figs. 1-6) having a "container"(see 12 of Figs. 1-6); "first and second liquids...differing substantially from each other in refractive index...without mixing with each other...making the boundary between said first and second liquids having a rounded shape"(see 11 and 13 of Figs. 1-6 and col. 3, lines 5-10); and an "electrode formed in said variable-power element in

such a place to avoid interference with passage of a bundle of rays incident upon said variable power element" or an "electrode formed in such a place as to avoid interference with passage of a bundle of rays incident upon said optical element"(see 16, 17, 26, 35-37 and 75-79 of Figs. 1-6); "said electrode being ring-shaped to surround at least one of said first and second liquids"(see FIG. 6 and col. 5, lines 35-60 and col. 8, lines 20-30); and "wherein an angle ψ is set so that a curvature radius of the boundary between the first and second liquids become large, where said angle $\psi = 90^\circ - \theta$, with θ being a contact angle between the side surface of the container and the boundary between said first and second liquids"(see Fig. 6 in APPENDIX I and II below).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-15, 17-28, and 30-32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,449,081 in view of Berge et al., PCT Publication No. WO99/18456 (U.S.

Patent No. 6,369,954, which corresponds to PCT Publication No. WO/18456, is being used as a translation).

The claimed "optical device", "optical system", "photo-taking device", and "image pickup means" is met by the patented "optical device"; the claimed "optical element", "variable-power element", and "variable-power optical element" is met by the patented "optical element"; the claimed "optical system" and "imaging optical system" is met by the patented "optical system"; the claimed "container" and "first and second fluids" are met by the patented "first fluid and second fluid being confined in a sealed space created between the first support and second support"; the claimed "electrode", "first electrode", and "second electrode" is met by the patented "first electrode" and "second electrode"; and the claimed "voltage application circuit for applying a voltage to said electrode, wherein the shape of the boundary between said two liquids is changed by application of a voltage through said electrode to change the quantity of transmitted light in the bundle of rays passing through said optical element", an "application circuit for applying a voltage to said electrode, wherein the shape of the boundary is changed by application of a voltage to change the refractive power with respect to light passing through said optical element" is met by the patented "...varying a voltage applied to said second fluid, the shape of an interface between said first fluid and second fluid is altered, so as to change an amount of light passing through said optical element". The features and functions of the claimed elements are similarly met by the features and functions of the above mentioned patented elements.

Claims 1-20 of U.S. Patent No. 6,449,081 do not appear to disclose an electrode "being ring-shaped to surround at least one of said first and second liquids" and "an angle ψ is set so that a curvature radius of the boundary between the first and second liquids become large, where said angle $\psi = 90^\circ - \theta$, with θ being a contact angle between the side surface of the container and the boundary between said first and second liquids".

Berge teaches providing a variable focus lens with insulating liquid 11 occupying the bottom portion of a cylindrical dielectric chamber 12 covered by a conductor liquid 13 with cylindrical electrodes placed side by side against the external surface or wall of the chamber to vary the focus of the lens (see FIGS. 6 and col. 5, lines 35-60 and col. 8, lines 20-30).

Berge teaches providing a variable focus lens, where an angle ψ between liquids 11 and 13 varies, when liquid 11 varies between its rest position A and its limit position B when a voltage is applied to liquid 13 and is varied between 0 volts and its maximum value, where $\psi = 90^\circ - \theta$, θ being an angle between the side surface of chamber 12 and the boundary between liquids 11 and 13 (see Fig. 6 in APPENDIX I and II below and col. 5, lines 55-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the "container" of the "optical element" or "variable-power element" or "variable-power optical element" of claims 1-20 of U.S. Patent No. 6,449,081 with cylindrical electrodes placed against the external wall of the "container" and to vary the angle between the "first and second fluids" in the "container", as taught

by Berge in order to apply a voltage to the "second fluid" to achieve a variation of the focus of the "optical element" or "variable-power element" or "variable-power optical element".


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (703) 308-2879. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell Adams can be reached on (703) 308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

RB
April 18, 2003


RUSSELL ADAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

APPENDIX I

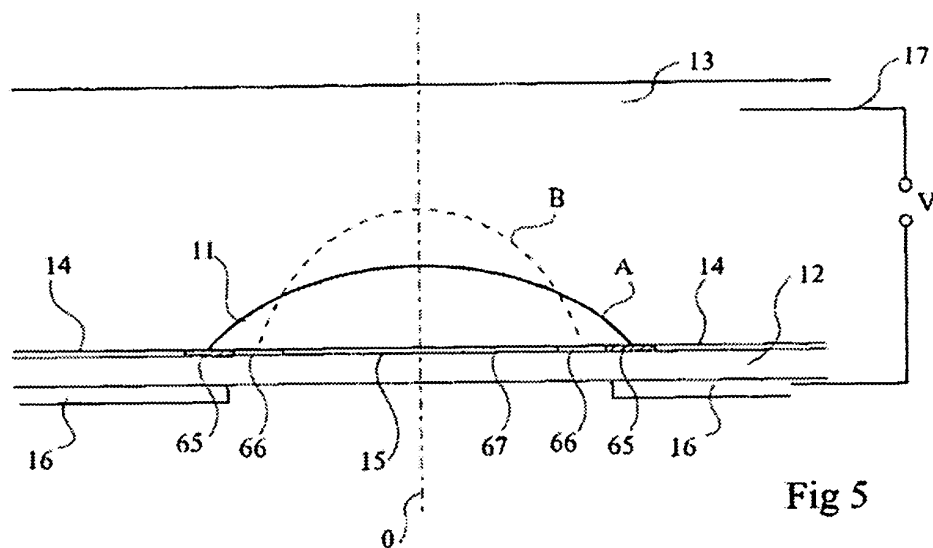


Fig 5

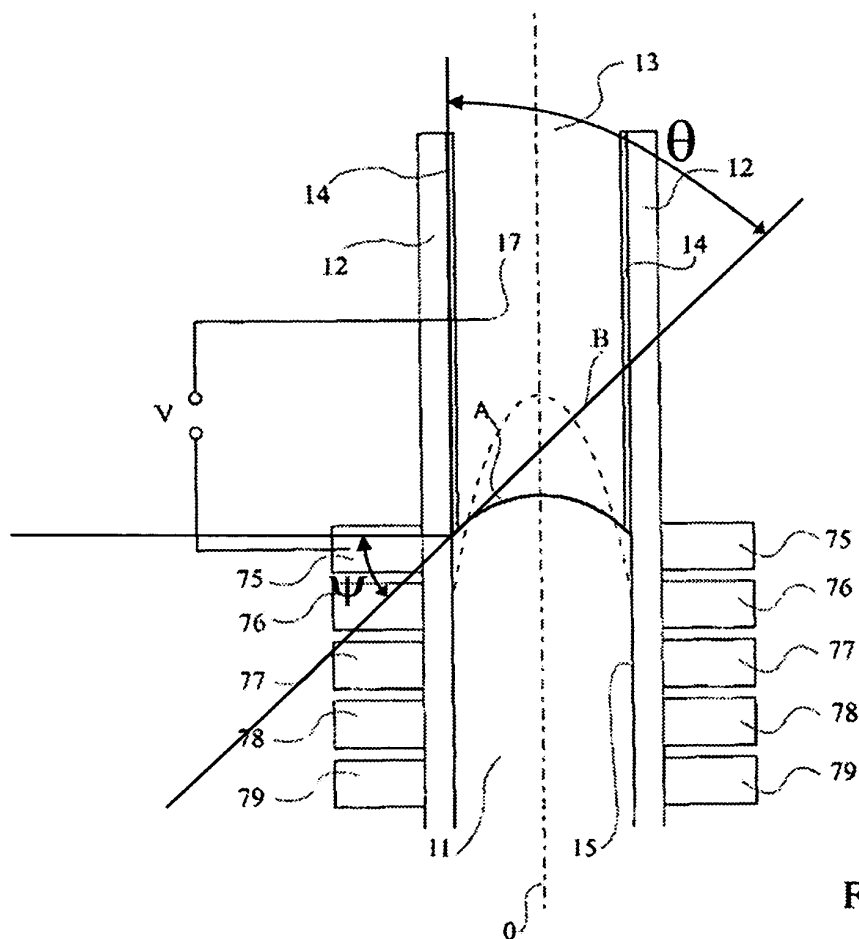


Fig 6

APPENDIX II

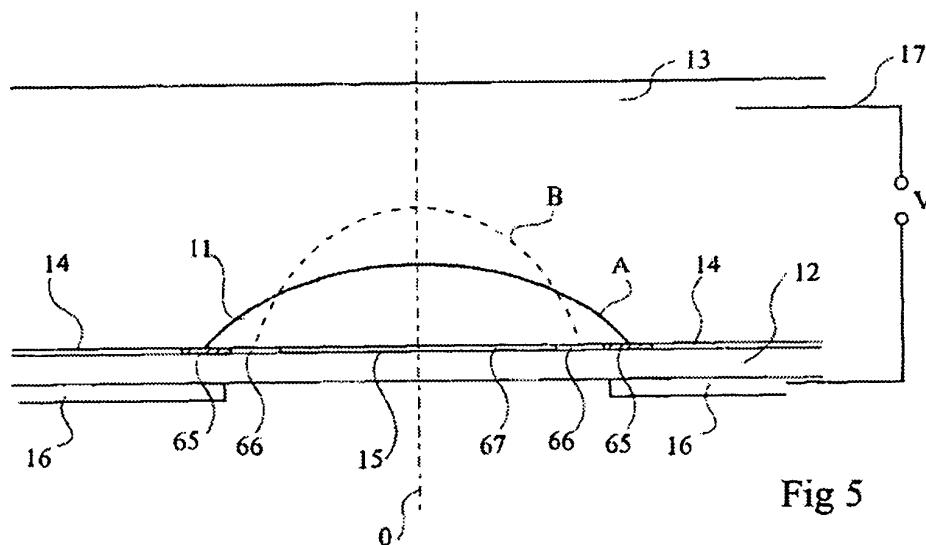


Fig 5

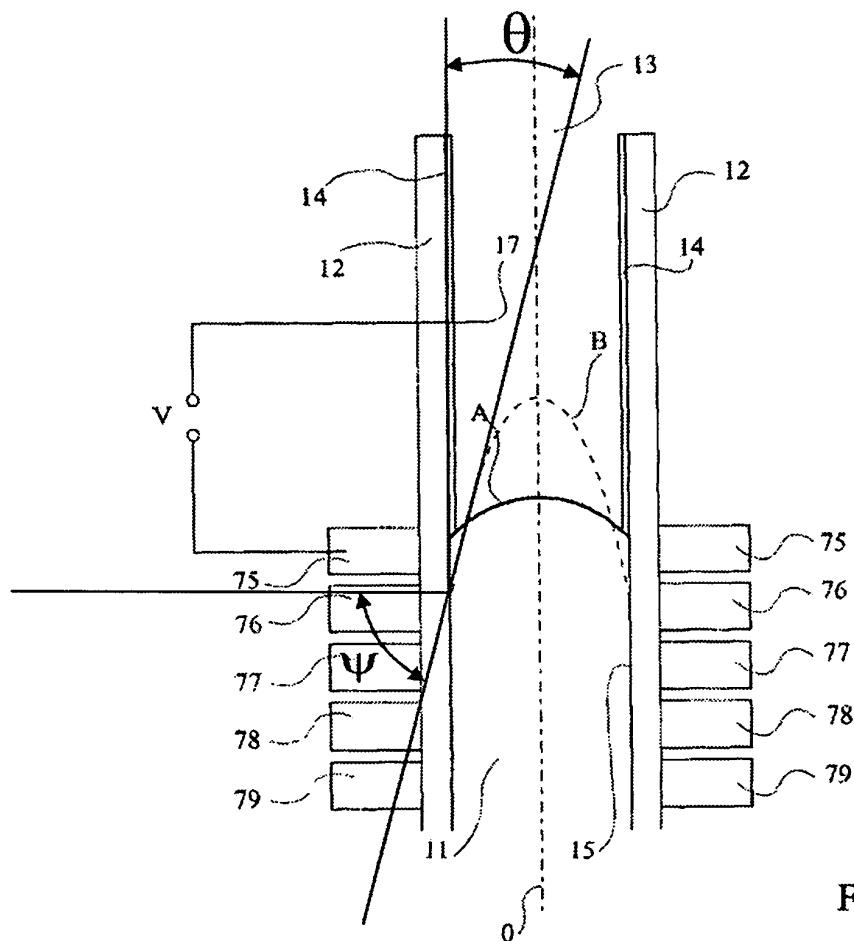


Fig 6